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| APPLICATION NO.                        | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|-----------------------|---------------------|------------------|
| 10/806,455                             | 03/23/2004  | Kazutoshi Higashiyama | A8319.0013/P013-A   | 1223             |
| 24998                                  | 7590        | 12/29/2005            | EXAMINER            |                  |
| DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP |             |                       | WILLS, MONIQUE M    |                  |
| 2101 L Street, NW                      |             |                       | ART UNIT            |                  |
| Washington, DC 20037                   |             |                       | PAPER NUMBER        |                  |
|  |             |                       | 1746                |                  |

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/806,455

Applicant(s)

HIGASHIYAMA ET AL.

Examiner

Monique M. Wills

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11/16/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,5 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5 and 16-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

This Office Action is responsive to the Amendment filed November 16, 2005. The rejection of claims 1 & 16-24 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-8 & 10 of U.S. Patent No. 6,890,673 is overcome. However, claims 1,5 & 16-24 are rejected under

### ***Allowable Subject Matter***

Claim 5 would be allowable over the prior art of record, because the prior art is silent to a hydrogen producing device for supplying at least one type of material to a reaction part together with air, oxygen or an oxidizing agent to produce hydrogen including selecting from  $n_1$  pre-set values a flow rate which was previously determined corresponding to required hydrogen production volumes; and for air, oxygen or oxidizing agent, supply amount of air, oxygen or oxidizing agent is set by selecting one from predetermined  $n_2$  pre-set values of flow rates, where  $n_1$  is smaller than  $n_2$ .

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Claim 1 would be allowable over the prior art of record, because the prior art does not disclose the use of two or more on/off valves to control the flow of reactants within a fuel cell system, to provide preset flows.

Claims 16-24 would be allowable based on their dependence to claims 1 and 5.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1,5 & 16-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "predetermined" is of uncertain meaning, rendering the claims vague and indefinite. It is unclear as to what values the term "predetermined" refers to.

### ***Response to Arguments***

Applicant's arguments, see page 2, filed November 16, 2005, with respect to the rejection(s) of claim(s) 1 & 16-24 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-8 & 10 of U.S. Patent No. 6,890,673 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection of claims 1, 5 & 16-24 is made under 35 U.S.C. 112, second paragraph

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Barr, may be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

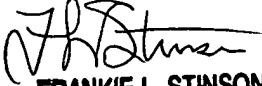
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MW

12/22/05

  
FRANKIE L. STINSON  
PRIMARY EXAMINER  
GROUP 3400 1700